DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
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REPLY TO
ATTENTION OF

Planning, Programs and Project
Management Division

JUN 16 2011

Dana Bayuk, Project Manager
NWR Region Cleanup Section
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 440
Portland, Oregon 97201-4987

Dear Mr. Bayuk:

This letter provides U.S. Army Corps of Engineers comments to the Draft Groundwater Source Control, Final Design Report, NW Natural GASCO Site, May 2011. These comments are provided on behalf of the U.S. Government Moorings (Moorings) site, located adjacent to the NW Natural property to the northwest. The Moorings site is owned by the United States of America and operated by the Portland District U.S. Army Corps of Engineers.

The Moorings Remedial Investigation (RI) completed in 2009 determined that the Fill Water Bearing Zone (WBZ) in the southern portion of the property contains elevated concentrations of cyanide, metals (aluminum, arsenic, cadmium, chromium, lead, and manganese), and PAHs in groundwater. The most widespread constituent was cyanide and the highest concentrations were located adjacent to the property boundary with NW Natural. The groundwater flow direction in the Fill WBZ in this portion of the Moorings property was determined to be from the south/southeast across the Moorings property toward the north to the Willamette River. Since there are no known sources of cyanide on the Moorings property, the most likely source is the former Manufactured Gas Plant spent oxide waste pile that was historically stored on the NW Natural site along the property boundary abutting the Moorings.

The NW Natural GASCO Groundwater Source Control Design Report was reviewed to determine if the proposed actions would impact shallow groundwater contamination observed on the Moorings property. The following comments are submitted:

1. The groundwater Remedial Action Objective for NW Natural source control is to prevent discharge of upland groundwater to the Willamette River as measured by analyzing groundwater hydrology data from the Site wells and the river. The Moorings RI determined that contaminated groundwater in the Fill WBZ is likely flowing from the NW Natural property, across the Moorings property, and eventually discharging to the Willamette River. Therefore, contaminated groundwater located on the Moorings property should be considered in the NW Natural source control design.

2. Groundwater modeling completed to support the current NW Natural extraction system design shows that there is capture of groundwater in the alluvial WBZ from the Moorings property at the northern-most extraction well. Since there is limited groundwater data along the Moorings property boundary, it could be concluded that the model calibration in this area would have a high uncertainty and potentially lead to an inaccurate capture zone assessment. The installation of additional monitoring wells in the alluvial WBZ should be considered along the boundary and on the Moorings property to adequately characterize groundwater flow and contamination and determine if discharge of cyanide contaminated groundwater from the Moorings site should be included in the remedy.

3. Since the groundwater extraction system will have limited influence on the Fill WBZ, an interceptor trench was proposed along the riverbank for source control. The proposed location of this trench would have little to no influence on the groundwater contamination found at the Moorings property. Again, there is a limited amount of groundwater data in the Fill WBZ along the Moorings property boundary that could lead to an inaccurate or incomplete characterization of the shallow groundwater contamination. An area of particular interest is where the historical spent oxide pile was located, which could be an ongoing source to the cyanide contamination found on the Moorings property.

We believe these data gaps along the Moorings property boundary may lead to an incomplete understanding and capture of the contaminant plume evident on the Moorings site, and potentially entering the Willamette River from the Moorings Property. We are willing to work with Oregon DEQ and NW Natural to provide access to the Moorings property for NW Natural to complete this data gap and meet the required source control Remedial Action Objective.

Thank you for the opportunity to comment on the source control report. Any concerns or questions you have with these comments may be addressed to me at 503-808-4725.

Electronic copies of this letter have been furnished to Mark Ader (EPA), Travis Shaw (Corps, Seattle District, Geotechnical & Environmental Restoration Branch), and Doug Craner (Corps, Portland District, Legal Office).

Sincerely,

Christine McBudai

Chris Budai, RPG, CEG, PMP
Project Manager